AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled. The listing of claims will replace all prior versions, and listing of claims in the application.

Listing of Claims

1. (Currently Amended) An apparatus comprising:

   a computing unit to compute a set of slope-normalized operator values corresponding to a set of respective signal samples, wherein said set of slope-normalized operator values are calculated using an operator multiplied by a slope-normalizing factor which is calculated using a maximum value of said signal samples.

2. (Original) The apparatus of claim 1 wherein said set of slope-normalized operator values comprises slope-normalized Kaiser operator values.
3. (Original) The apparatus of claim 1 wherein one or more of said set of slope-normalized operator values are substantially independent of a relationship between values of a corresponding pair of signal samples in said set of signal samples.
4. (Original) The apparatus of claim 1 wherein said set of slope-normalized operator values is generally proportional to the amplitude of said set of signal samples, respectively.
5. (Original) The apparatus of claim 1 comprising an up-sampler to calculate values of said set of signal samples based on a set of received signals.
6. (Original) The apparatus of claim 5 wherein said up-sampler comprises an interpolator.
7. (Original) The apparatus of claim 5 wherein said set of signal samples has a sampling resolution equal to at least the sampling resolution of said set of received signals.
8. (Original) The apparatus of claim 1 comprising a signal value detector to detect a maximum value of said received signals.

9. (Currently Amended) The apparatus of claim 8, wherein said ~~set of slope-normalized operator values are calculated using an operator multiplied by a~~ slope-normalizing factor, SN_{factor}, is calculated according to the following equation:

$$SN_{factor} = \frac{|x(n)|/|x_{max}|}{\sqrt{abs(|x(n-1)|-|x(n+1)|)}}$$

wherein n is the number of values in said set of operator values and in said set of signal samples, wherein x(n) denotes the value of said signal samples, and wherein x_{max} denotes said maximum value.

10. (Original)The apparatus of claim 9 wherein at least some of said n signal sample values are complex values, and wherein said set of slope-normalized operator values comprises slope-normalized Kaiser values calculated using the following algorithm:

if $(|x(n-1)| - |x(n+1)|) == 0$
$\psi(n) = ((|x(n)|/|x_{max}|))*[x_c(n)*x(n) - 1/2[x_c(n+1)*x(n-1)+x(n+1)*x_c(n-1)]]$
else
$\psi(n) = SN_{factor}*[x_c(n)*x(n) - 1/2[x_c(n+1)*x(n-1)+ x(n+1)*x_c(n-1)]]]$
wherein $\psi(n)$ denotes the slope-normalized Kaiser value corresponding to x(n), and wherein $x_c(n)$ denotes the complex component of x(n).

11. (Original) The apparatus of claim 1 comprising a path selector to select one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively.

12. (Currently Amended) An ~~The~~ apparatus ~~of claim 11~~ comprising:

a computing unit to compute a set of slope-normalized operator values corresponding to a set of respective signal samples; and

a path selector to select one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively,

wherein said path selector provides information associated with said one or more dominant path, and wherein said information comprises at least one type of information selected from the group consisting of a relative path delay, a relative path amplitude and a number of paths.

13. (Currently Amended) A wireless communications device comprising:

a Global System for Mobile-communications transceiver able to send and receive signals; and

a computing unit to compute a set of slope-normalized operator values corresponding to a set of respective signal samples, wherein said set of slope-normalized operator values are calculated using an operator multiplied by a slope-normalizing factor which is calculated using a maximum value of said signal samples.

14. (Original) The wireless communications device of claim 13 wherein said set of slope-normalized operator values comprises slope-normalized Kaiser operator values.

15. (Original) The wireless communications device of claim 14 wherein one or more of said set of slope-normalized operator values are substantially independent of a relationship between values of a corresponding pair of signal samples in said set of signal samples.

16. (Original) The wireless communications device of claim 14 wherein said set of slope-normalized operator values is generally proportional to the amplitude of said set of signal samples, respectively.

17. (Original) The wireless communications device of claim 14 comprising an up-sampler to calculate values of said set of signal samples based on a set of received signals.

18. (Original) The wireless communications device of claim 17 wherein said up-sampler comprises an interpolator.

19. (Original) The wireless communications device of claim 14 comprising a signal value detector to detect a maximum value of said received signals.

20. (Original) The wireless communications device of claim 14 comprising a path selector to select one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively.

21. (Currently Amended) A method comprising:

computing a set of slope-normalized operator values corresponding to a set of signal samples; ~~and~~

selecting one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively; and

providing information associated with said one or more dominant path, wherein said information comprises at least one type of information selected from the group consisting of a relative path delay, a relative path amplitude and a number of paths.

22. (Original) The method of claim 21 wherein said set of slope-normalized operator values comprises slope-normalized Kaiser operator values.

23. (Original) The method of claim 22 wherein one or more of said set of slope-normalized operator values are substantially independent of a relationship between sample values of a corresponding pair of signal samples in said set of signal samples.

24. (Original) The method of claim 22 wherein said slope-normalized operator values are generally proportional to the amplitude of said set of signal samples, respectively.

25. (Original) The method of claim 22 comprising up-sampling a set of received signals to provide said set of signal samples.

26. (Original) The method of claim 25 wherein said set of signal samples has a sampling resolution equal to at least the sampling resolution of said set of received signals.

27. (Original) The method of claim 25 comprising detecting a maximum value of said received signals, wherein computing slope-normalized operator values comprises computing said slope-normalized operator values using said maximum value.

28. (Currently Amended) An article comprising a storage medium having stored thereon instructions that, when executed by a processing platform, result in:

computing a set of slope-normalized operator values corresponding to a set of signal samples; ~~and~~

selecting one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively; and

providing information associated with said one or more dominant path, wherein said information comprises at least one type of information selected from the group consisting of a relative path delay, a relative path amplitude and a number of paths.

29. (Original) The article claim 28 wherein said set of slope-normalized operator values comprises slope-normalized Kaiser operator values.

30. (Original) The article claim 28 wherein one or more of said set of slope-normalized operator values are substantially independent of a relationship between sample values of a corresponding pair of signal samples in said set of signal samples.

31. (Original) The article of claim 28 wherein said slope-normalized operator values are generally proportional to the amplitude of said set of signal samples, respectively.

32. (Original) The article of claim 28 wherein said instructions result in up-sampling a set of received signals to provide said set of signal samples.

33. (Original) The article of claim 32 wherein said instructions result in detecting a maximum value of said received signals, wherein computing slope-normalized operator values comprises computing said slope-normalized operator values using said maximum value.

34. (Currently Amended) A communication system comprising:

a first communication device to transmit a signal through a communication channel; and

a second communication device to receive said signal, said second communication device comprising a computing unit to compute a set of slope-normalized operator values corresponding to a set of respective signal samples, wherein said set of slope-normalized operator values are calculated using an operator multiplied by a slope-normalizing factor which is calculated using a maximum value of said signal samples.

35. (Original) The communication system of claim 34 wherein said set of slope-normalized operator values comprises slope-normalized Kaiser operator values.

36. (Original) The communication system of claim 34 wherein one or more of said set of slope-normalized operator values is substantially independent of a relationship between values of a corresponding pair of signal samples in said set of signal samples.

37. (Original) The communication system of claim 34 wherein said set of slope-normalized operator values is generally proportional to the amplitude of said set of signal samples, respectively.

38. (Original) The communication system of claim 34 wherein said second communication device comprises an up-sampler to calculate values of said set of signal samples based on a set of received signals.

39. (Original) The communication system of claim 34 wherein said second communication device comprises a signal value detector to detect a maximum value of said received signals.

40. (Original) The communication system of claim 34 wherein said second communication device comprises a path selector to select one or more dominant paths corresponding to one or more of said set of slope-normalized operator values, respectively.